1. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

   No more than 3 units from the number $-10$.

   A. $[-13, -7]$

   B. $(-13, -7)$

   C. $(-\infty, -13] \cup [-7, \infty)$

   D. $(-\infty, -13) \cup (-7, \infty)$

   E. None of the above

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2. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

   Less than 6 units from the number $-6$.

   A. $[-12, 0]$

   B. $(-\infty, -12) \cup (0, \infty)$

   C. $(-\infty, -12] \cup [0, \infty)$

   D. $(-12, 0)$

   E. None of the above

---

3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 - 5x \leq \frac{-36x - 4}{8} < 4 - 7x$$

   A. $(a, b]$, where $a \in [-14.25, -9]$ and $b \in [-1.5, 4.5]$

   B. $[a, b)$, where $a \in [-14.25, -12]$ and $b \in [0, 4.5]$

   C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-14.25, -7.5]$ and $b \in [0.75, 3]$

   D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-13.5, -10.5]$ and $b \in [0.75, 4.5]$

E. None of the above.

---

4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 9x \leq \frac{84x + 5}{9} < 9 + 3x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [18, 20.25]$ and $b \in [-1.57, -0.15]$

B. $[a, b)$, where $a \in [18, 23.25]$ and $b \in [-6, 0]$

C. $(-\infty, a] \cup (b, \infty)$, where $a \in [17.25, 23.25]$ and $b \in [-2.62, -0.67]$

D. $(a, b]$, where $a \in [18.75, 24]$ and $b \in [-1.8, -0.15]$

E. None of the above.

---

5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 6x > 9x \text{ or } -3 + 6x < 9x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 5.25]$ and $b \in [0, 5.25]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6.75, -0.75]$ and $b \in [-3.75, 1.5]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.25, 0.75]$ and $b \in [-1.5, 1.5]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [0, 3]$ and $b \in [1.5, 6]$

E. $(-\infty, \infty)$

---

6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-9}{2} - \frac{10}{4}x \leq \frac{4}{6}x - \frac{7}{9}$$

A. $[a, \infty)$, where $a \in [0.75, 1.5]$

B. $[a, \infty)$, where $a \in [-2.25, 0.75]$

C. $(-\infty, a]$, where $a \in [0, 6]$

D. $(-\infty, a]$, where $a \in [-2.25, 0]$

E. None of the above.

---

7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$9 + 3x > 6x \text{ or } 6 + 9x < 10x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-11.25, -1.5]$ and $b \in [-7.5, 2.25]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.25, 4.5]$ and $b \in [5.25, 6.75]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-11.25, -3.75]$ and $b \in [-7.5, 1.5]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [0.75, 6]$ and $b \in [2.25, 7.5]$

E. $(-\infty, \infty)$

---

8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4x - 6 \geq 6x + 5$$

A. $[a, \infty)$, where $a \in [-0.2, 4]$

B. $(-\infty, a]$, where $a \in [-6.1, 0.9]$

C. $[a, \infty)$, where $a \in [-2.1, 1]$

D. $(-\infty, a]$, where $a \in [-0.9, 3.1]$

E. None of the above.

---

9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x + 5 \leq 3x + 8$$

A. $[a, \infty)$, where $a \in [-0.63, 0]$

B. $(-\infty, a]$, where $a \in [-1.19, 0]$

C. $(-\infty, a]$, where $a \in [0, 0.27]$

D. $[a, \infty)$, where $a \in [-0.18, 0.5]$

E. None of the above.

---

10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-7}{9} - \frac{4}{6}x < \frac{6}{5}x + \frac{10}{2}$$

A. $(a, \infty)$, where $a \in [-9, 0]$

B. $(-\infty, a)$, where $a \in [-3.75, 0.75]$

C. $(-\infty, a)$, where $a \in [1.5, 6]$

D. $(a, \infty)$, where $a \in [3, 5.25]$

E. None of the above.

---

11. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

No less than 6 units from the number 9.

A. $(-\infty, 3) \cup (15, \infty)$

B. $[3, 15]$

C. $(3, 15)$

D. $(-\infty, 3] \cup [15, \infty)$

E. None of the above

---

12. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

Less than 5 units from the number 7.

A. $(-\infty, 2) \cup (12, \infty)$

B. $(2, 12)$

C. $[2, 12]$

D. $(-\infty, 2] \cup [12, \infty)$

E. None of the above

---

13. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 9x \leq \frac{77x + 6}{8} < -9 + 7x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [12.75, 20.25]$ and $b \in [0.75, 6.75]$

B. $(a, b]$, where $a \in [13.5, 16.5]$ and $b \in [0.75, 4.5]$

C. $[a, b)$, where $a \in [12, 21.75]$ and $b \in [-0.75, 4.5]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [13.5, 16.5]$ and $b \in [1.5, 5.25]$

E. None of the above.

---

14. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$6 - 6x < \frac{-32x - 5}{7} \leq 9 - 5x$$

A. $[a, b)$, where $a \in [-10.5, -3]$ and $b \in [-30.75, -21]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-6, -3.75]$ and $b \in [-23.25, -19.5]$

C. $(a, b]$, where $a \in [-7.5, -3.75]$ and $b \in [-28.5, -21]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-6, -1.5]$ and $b \in [-23.25, -18.75]$

E. None of the above.

---

15. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 7x > 9x \text{ or } 8 + 9x < 10x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-12.75, -6.75]$ and $b \in [0, 3]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6.75, 3.75]$ and $b \in [6.75, 10.5]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.25, 2.25]$ and $b \in [3.75, 9]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9.75, -4.5]$ and $b \in [-7.5, 6.75]$

E. $(-\infty, \infty)$

---

16. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-3}{7} + \frac{6}{4}x > \frac{7}{9}x + \frac{5}{5}$$

A. $(a, \infty)$, where $a \in [0.75, 3.75]$

B. $(-\infty, a)$, where $a \in [-5.25, 0.75]$

C. $(-\infty, a)$, where $a \in [0, 3]$

D. $(a, \infty)$, where $a \in [-4.5, 0]$

E. None of the above.

---

17. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 3x > 5x \text{ or } -9 + 3x < 6x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, -3.75]$ and $b \in [-5.25, -2.25]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9.75, 0]$ and $b \in [-6, -0.75]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 5.25]$ and $b \in [2.25, 9]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [0.75, 3.75]$ and $b \in [2.25, 6.75]$

E. $(-\infty, \infty)$

---

18. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-10x - 7 < 5x + 6$$

A. $(a, \infty)$, where $a \in [0.5, 1.4]$

B. $(-\infty, a)$, where $a \in [-2.31, -0.12]$

C. $(a, \infty)$, where $a \in [-1.6, -0.2]$

D. $(-\infty, a)$, where $a \in [0.11, 1.31]$

E. None of the above.

---

19. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x - 8 \leq -7x + 4$$

A. $[a, \infty)$, where $a \in [-6, -1]$

B. $(-\infty, a]$, where $a \in [2, 11]$

C. $(-\infty, a]$, where $a \in [-8, -4]$

D. $[a, \infty)$, where $a \in [2, 7]$

E. None of the above.

---

20. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-9}{4} + \frac{4}{5}x < \frac{8}{6}x + \frac{9}{2}$$

A. $(-\infty, a)$, where $a \in [-14.25, -11.25]$

B. $(-\infty, a)$, where $a \in [10.5, 16.5]$

C. $(a, \infty)$, where $a \in [9.75, 13.5]$

D. $(a, \infty)$, where $a \in [-15, -10.5]$

E. None of the above.

---

21. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

More than 9 units from the number $-1$.

A. $[-10, 8]$

B. $(-\infty, -10) \cup (8, \infty)$

C. $(-10, 8)$

D. $(-\infty, -10] \cup [8, \infty)$

E. None of the above

---

22. Using an interval or intervals, describe all the $x$-values within or including a distance of the given values.

More than 5 units from the number 7.

A. $(-\infty, -2] \cup [12, \infty)$

B. $(-2, 12)$

C. $(-\infty, -2) \cup (12, \infty)$

D. $[-2, 12]$

E. None of the above

---

23. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 - 6x < \frac{-28x - 9}{5} \leq -7 - 7x$$

A. $[a, b)$, where $a \in [14.25, 21]$ and $b \in [1.5, 5.25]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [13.5, 21]$ and $b \in [2.25, 5.25]$

C. $(a, b]$, where $a \in [12, 18.75]$ and $b \in [3, 6.75]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [12.75, 18]$ and $b \in [-0.75, 11.25]$

E. None of the above.

---

24. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 - 3x \leq \frac{-7x - 3}{4} < 6 - 8x$$

A. $[a, b)$, where $a \in [-2.25, 3.75]$ and $b \in [-2.62, -0.97]$

B. $(a, b]$, where $a \in [1.5, 5.25]$ and $b \in [-4.5, 0]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [0.75, 6]$ and $b \in [-2.32, -0.82]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [0, 7.5]$ and $b \in [-1.57, -0.53]$

E. None of the above.

---

25. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 3x > 4x \text{ or } -3 + 7x < 9x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9.75, -7.5]$ and $b \in [-3.75, -0.75]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 2.25]$ and $b \in [6, 12]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [0, 2.25]$ and $b \in [5.25, 11.25]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-12.75, -4.5]$ and $b \in [-3.75, 0]$

E. $(-\infty, \infty)$

---

26. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-9}{2} - \frac{9}{6}x \leq \frac{-5}{7}x + \frac{3}{4}$$

A. $[a, \infty)$, where $a \in [4.5, 7.5]$

B. $(-\infty, a]$, where $a \in [-8.25, -0.75]$

C. $[a, \infty)$, where $a \in [-8.25, -6]$

D. $(-\infty, a]$, where $a \in [6, 9]$

E. None of the above.

---

27. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 7x > 8x \text{ or } 7 + 5x < 8x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3, -1.5]$ and $b \in [4.27, 6]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8.25, -3.75]$ and $b \in [1.27, 4.42]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6, -3]$ and $b \in [-2.25, 3]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3, 0]$ and $b \in [3, 7.5]$

E. $(-\infty, \infty)$

---

28. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$4x - 10 \geq 7x + 5$$

A. $[a, \infty)$, where $a \in [2, 6]$

B. $(-\infty, a]$, where $a \in [1, 8]$

C. $[a, \infty)$, where $a \in [-10, -4]$

D. $(-\infty, a]$, where $a \in [-11, 0]$

E. None of the above.

---

29. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x - 7 > -4x + 7$$

A. $(-\infty, a)$, where $a \in [0.8, 5.8]$

B. $(a, \infty)$, where $a \in [2.8, 3.8]$

C. $(-\infty, a)$, where $a \in [-4.8, -1.8]$

D. $(a, \infty)$, where $a \in [-7.8, -1.8]$

E. None of the above.

---

30. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{6}{8} + \frac{6}{4}x \leq \frac{8}{9}x - \frac{3}{5}$$

A. $(-\infty, a]$, where $a \in [1.5, 3]$

B. $(-\infty, a]$, where $a \in [-4.5, -0.75]$

C. $[a, \infty)$, where $a \in [0, 5.25]$

D. $[a, \infty)$, where $a \in [-3.75, 0]$

E. None of the above.

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